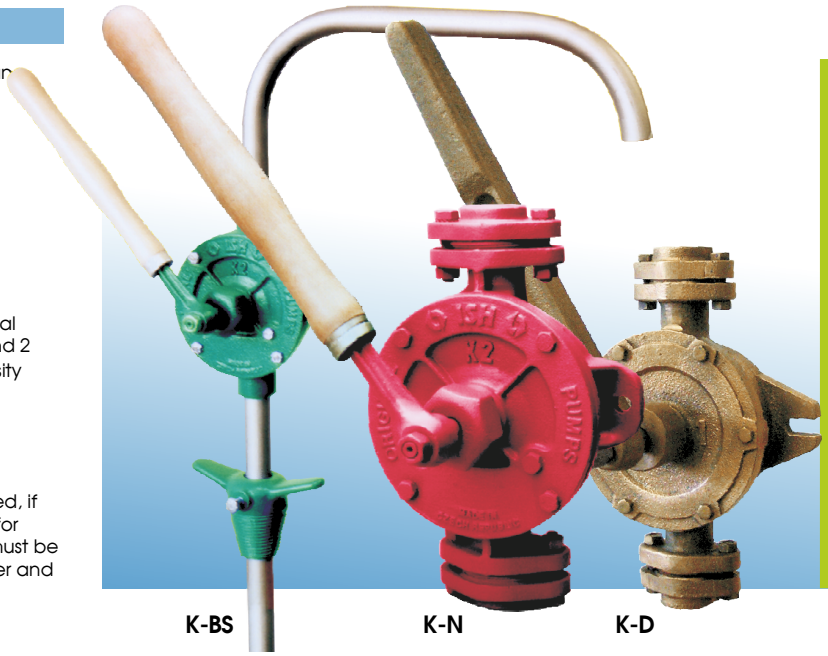
K
SEMI ROTARY HAND WING PUMPS

ISH PUMPS OLOMOUC

APPLICATION

- semi rotary hand wing pumps are designed for pumping clear liquids without mechanical impurities up to 80 ^{O}C.
- semi rotary hand wing pumps K-N
  - for pumping drinking and process water
  - suitable for flooding of pump suction pipe
  - not intended for pumping flammable liquids
- semi rotary hand wing pumps K-B + K-BS
  - for pumping flammable liquids (such as gasoline, diesel, kerosene and other fuels, paraffin, alcohol, light chemical solutions, eatable oils etc.) in hazardous areas zone 1 and 2 (according to EN 60079-10) above ρ = 770 kg / m, viscosity of 0.7 mm / s and 2 (acc. to ČSN EN 60079-10) above ρ =770 kg/m^{3}, viscosity above 0,7 mm^{2}/s.
  - pumping of ether and carbon disulphide is prohibited!
  - installed pump must be always electrostatically grounded, if electrostatic grounding is not ensured by other means (for example through the suction or discharge pipes, etc.) must be grounding connected to the connecting screws of cover and body between two lock washers
  - for pumping jet fuel is intended all-bronze design, K1-BB



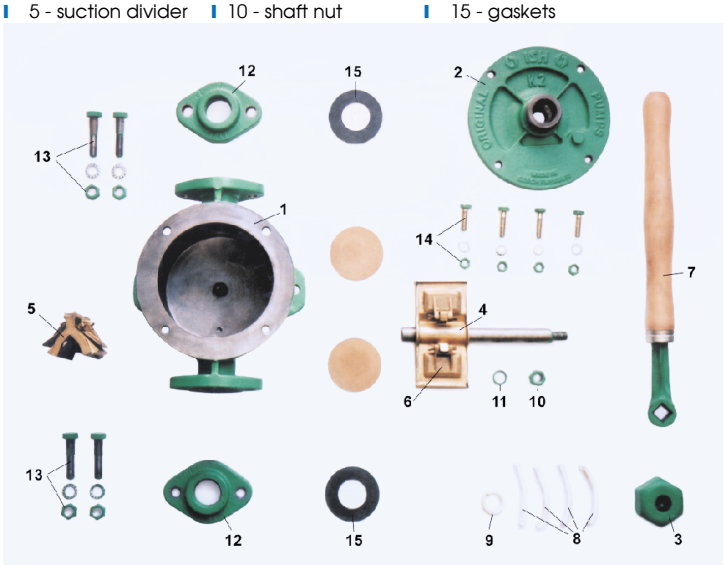
TYPE IDENTIFICATION

K 1 - B B

- identification
  - B - Bronze - only size 0,1,2
  - S - set in a barrel
- type of fluid
  - N - water - wooden handle
  - D - water - dimensions according to DIN
  - B - flammable liquid - metal handle
- the size of the pump
  - 00, 0, 1, 2, 3, 4, 5, 7
- hand wing pump

Pump components

- 1 - body
- 2 - cover
- 3 - packing nut
- 4 - wing and shaft
- 5 - suction divider
- 6 - valves
- 7 - handle
- 8 - seal
- 9 - ring seal
- 10 - shaft nut
- 11 - washer
- 12 - counter-flange
- 13 - flange fasteners
- 14 - cover fasteners
- 15 - gaskets



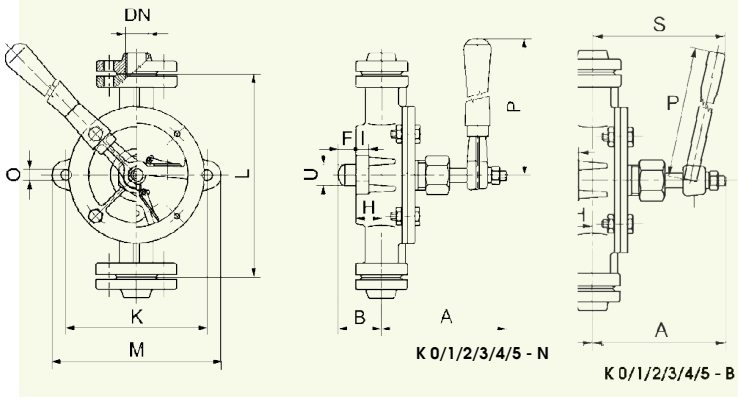
CONSTRUCTION

- **K**
  - semi rotary hand wing pumps K, K-B, K-D, K-BB - consists of the body, cover, wing, suction divider, 4x butterfly valve, shaft and handle, the shaft operated by hand swings precisely machined wing that is moving in the pump body and on the suction side is set fixed suction divider
  - wing and suction divider split the inner space into four parts
  - in the wing and suction divider are cut butterfly valves, allowing air intake and discharge at wing movement - so-called double – acting operation - half wing sucks and the other fluid displaces
  - the body is closed with cover, through which passes the shaft with handle, washer and nut, shaft sealing in the cover is made by soft (cord) packing (asbestos-free) – pushed by matrix
  - the pump has two feet for mounting on a vertical wall, bracket or other structure, for its connection are used flanges with threaded counter-flanges
  - the design and material of the pumps KB, K-BB provides their electrostatic conductivity and must be grounded
- **K-BS**
  - hand pump sets consist of:
    - from modified wing design pumps KB (without mounting feet and without suction and discharge flanges) and must be grounded
    - from suction rank formed by suction tube L and barrel plug in cylinder design
    - from the discharge rank with the discharge tube
  - suction rank:
    - is composed of galvanized pipe and connecting barrel plug- a cylindrical plugs with thread G2 "that allows installation on barrels and for setting required immersion in a barrel
    - plug on the suction pipe is secured by setscrew
  - discharge rank:
    - consists of the discharge tube and fluid outlet is directly at the pump

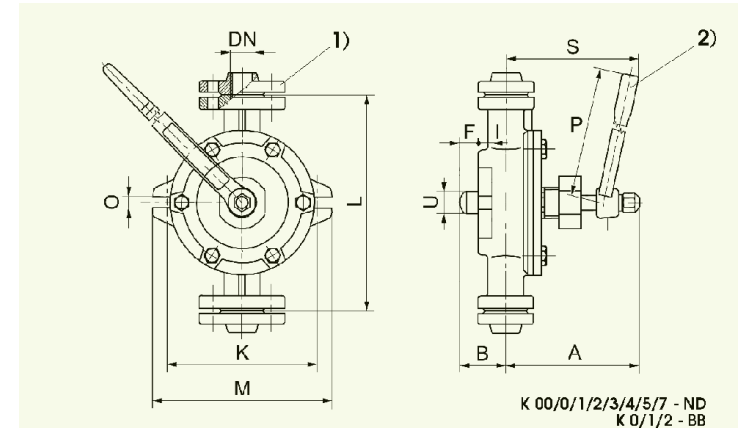
K
SEMI ROTARY HAND WING PUMPS

Size		K 0	K 1	K 2	K 3	K 4	K 5
DN	mm	15	20	25	32	32	40
G	inches	1/2	3/4	1	1 1/4	1 1/4	1 1/2
A	mm	130	130	149	169	185	195
B	mm	52	50	55	57	72	73
F	mm	16	20	18	24	28	31
I	mm	14	13	12	16	16	17
K	mm	130	150	170	200	220	240
L	mm	175	205	230	275	295	320
M	mm	160	180	194	240	255	275
O	mm	13	13	13	13	13	13
P	mm	300	320	360	450	500	600
combustibles - S	mm	167	167	195	237	253	263
H	mm	35	30	37	33	40	37
U	mm	25	25	27	30	32	35
min. flow	l.min^{-1}	10,5	16,5	24	30,5	45	53,5
max. suction height	m	7	7	7	7	7	7
max. delivery head	m	25	25	25	22	22	20
Number of double strokes	-	65	60	55	50	50	45
weight	kg	5,1	6,1	8,8	11,5	12,6	16,0

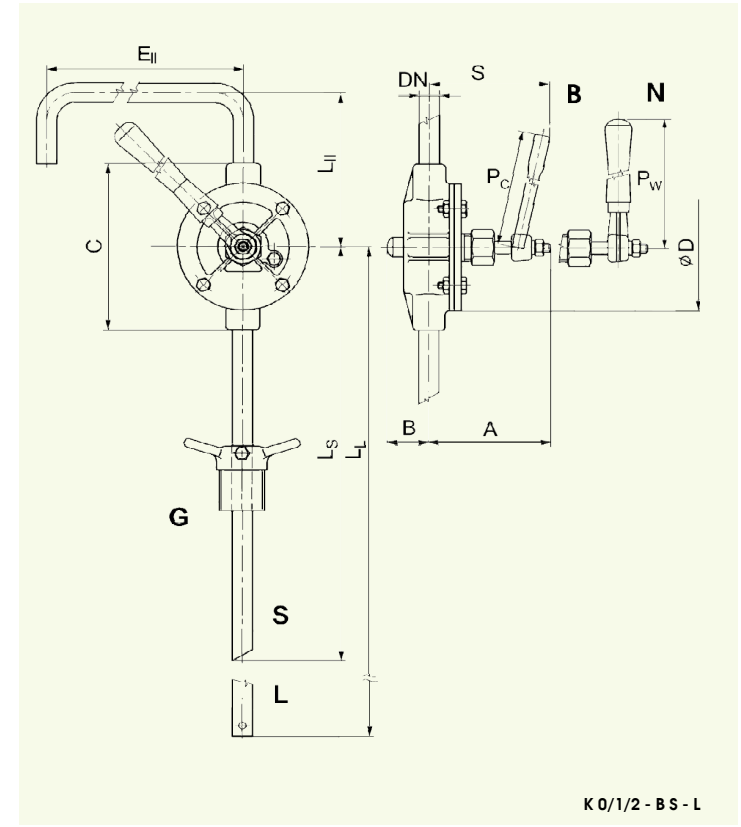
BASIC DIMENSIONS



Size		K 00	K 0	K 1	K 2	K 3	K 4	K 5	K 7
DN	mm	10	15	20	25	32	32	40	50
G	inches	3/8	1/2	3/4	1	1 1/4	1 1/4	1 1/2	2
A	mm	136	141	141	164	177	194	208	222
B	mm	50	52	50	55	58	74	73	86
F	mm	20	22	20	18	25	30	30	34
I	mm	10	12	12	12	15	15	16	15
K	mm	98	125	145	165	175	195	220	290
L	mm	110	175	205	230	235	260	290	360
M	mm	120	160	180	200	205	235	280	340
O	mm	7	12	12	12	12	13	13	15
P	mm	230	300	300	360	550	550	600	600
S	mm	112	166	166	195	237	254	262	268
U	mm	26	25	30	32	30	32	40	46
min. flow	l.min^{-1}	9	11	18	30	33	50	58	90
Max. suction height	m	7	7	7	7	7	7	7	7
max. discharge head	m	25	25	25	25	22	22	20	15
Number of double strokes	-	80	65	60	55	50	50	45	40
weight	kg	3,2	6,0	7,0	9,0	12,0	14,5	18,0	31,6



Size		K_-BS	K 0	K 1	K 2
DN	mm	all	15	20	25
G	inches	all	1/2	3/4	1
D	mm	all	135	150	170
A	mm	all	130	130	149
B	mm	all	50	50	57
C	mm	all	175	205	230
E II	mm	II _ _ _	430	460	460
L II	mm	II _ _ _	295	292	311
L s	mm	_ S_ _	870	880	893
L L	mm	_ L_ _	1170	1180	1193
Pw	mm	_ _W_	320	360	450
Pc	mm	_ _C_	300	320	360
S	mm	_ _C_	167	167	195
min. flow	l.min^{-1}	all	10,5	16,5	24
max. suction height	m	all	7	7	7
max. discharge head	m	all	25	25	25
number of double strokes	-	all	65	60	55
weight	kg	II _W_	7,7	9,5	13
weight	kg	II _C_	8,7	10,5	14



- dimensions are in millimeters and are informative
- dimensions are in millimeters and are informative 20 °C
- flow rate Q is valid for the specified number of double strokes and geodetic suction and discharge head and ZVG ZSG = 1 m. At maximum geodetic suction and discharge head ZSG ZVG is not valid the Q mentioned in the table
- max. ZSG geodetic suction height mentioned in the table reaches watered pump with basket, unwatered pump reaches geodetic suction height ZSG = 2 m

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